

2018 Current Fiscal Year Report: Glen Canyon Dam Adaptive Management Work Group

Report Run Date: 06/05/2019 05:25:35 PM

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|---|---|----------------------------------|------------------------------|
| 1. Department or Agency | | 2. Fiscal Year | |
| Department of the Interior | | 2018 | |
| 3. Committee or Subcommittee | | 3b. GSA Committee No. | |
| Glen Canyon Dam Adaptive Management Work Group | | 5163 | |
| 4. Is this New During Fiscal Year? | 5. Current Charter | 6. Expected Renewal Date | 7. Expected Term Date |
| No | 09/19/2017 | 09/19/2019 | |
| 8a. Was Terminated During Fiscal Year? | 8b. Specific Termination Authority | 8c. Actual Term Date | |
| No | Public Law 102-575 | | |
| 9. Agency Recommendation for Next Fiscal Year | 10a. Legislation Req to Terminate? | 10b. Legislation Pending? | |
| Continue | Not Applicable | Not Applicable | |
| 11. Establishment Authority Authorized by Law | | | |
| 12. Specific Establishment Authority | 13. Effective Date | 14. Committee Type | 14c. Presidential? |
| Grand Canyon Protection Act (Public Law 102-575) | 10/30/1992 | Continuing | No |
| 15. Description of Committee Scientific Technical Program Advisory Board | | | |
| 16a. Total Number of Reports | No Reports for this Fiscal Year | | |

17a. Open 7 **17b. Closed** 0 **17c. Partially Closed** 0 **Other Activities** 0 **17d. Total** 7

Meetings and Dates

| Purpose | Start | End |
|--|------------|------------|
| (AMWG) Discussed, reviewed, and received updates on: (1) Brown Trout Workshop held Sep. 21-22, 2017, (2) Basin hydrology and 2018 dam operations, (3) Rainbow Trout Stocking in Lees Ferry, (4) 2018 GCDAMP Annual Reporting Meeting, (5) DOI Invasive Species Initiative, (6) NPS' EA: "Expanded Non-native Aquatic Species Management Plan in Glen Canyon National Recreation Area and Grand Canyon National Park below Glen Canyon Dam," (7) Science Advisors' 2018 Work Plan, (8) Possible Long-Term Experimental and Management Plan (LTEMP) experiments in 2018, (8) Considerations for seasonal scheduling of High Flow Experiments (HFEs), and (9) Glen Canyon Dam Adaptive Management (Program) Administrative History. Heard Stakeholder presentation from the Utah Associated Municipal Power Systems (UAMPS) organization. | 02/14/2018 | 02/15/2018 |
| (AMWG): Discussed, reviewed and received updates on: (1) Brown Trout Workshop, (2) Rainbow Trout Stocking in Lees Ferry, (3) Basin hydrology and Water Year 2019 hydrograph, (4) Proposed FY 2019 Budget and Work Plan, (5) Proposed U.S. Fish and Wildlife Service (USFWS) Downlisting of Humpback Chub from Endangered to Threatened, (6) Translocation of humpback chub into Bright Angel Creek (a joint project of Grand Canyon National Park, Bureau of Reclamation, and USFWS, and (7) Implementation of Macroinvertebrate Production Flows (Bug Flows) May 1 to August 30, 2018. | 05/22/2018 | 05/22/2018 |

| | | |
|--|---|-------------------------|
| | <p>(AMWG) Discussed, reviewed and received updates on: (1) Fiscal Year 2019 Funding, (2) Adaptive Management Work Group goals, (3) Basin hydrology and dam operations, (4) Recommendation to the Secretary regarding hydropower funding for the Glen Canyon Dam Adaptive Management Program, (5) Evaluation of temperature control methods at Glen Canyon Dam, (6) Progress on Bug Flow Experiment, and do bug flows result in better fishing, (7) Fiscal Year 2019 budget and work plan, (8) Spring High Flow Experiments, (9) Basin Fund and revenue overview, (10) Joint Tribal Liaison report, (11) Science Advisors' 2018 Work Plan, (12) NPS Expanded Non-native Aquatic Species Management Plan and Environmental Assessment, (13) Stakeholder's perspective from the National Park Service, (14) Grand Canyon Monitoring and Research Center science updates, (15) Possible High Flow Experiment, and (16) Motion for High Flow Experiment workshop.</p> | 08/22/2018 - 08/23/2018 |
| [Glen Canyon Dam Technical Work Group] | <p>(TWG) Discussed, reviewed and received updates on: (1) Upcoming monitoring and research trips in the Grand Canyon, (2) Rainbow Trout stocking in Glen Canyon, (3) Potential High Flow Experiment, (4) Science Advisors Program, (5) Plans for Grand Canyon Monitoring and Research Center Water Quality Review on October 24-26, 2017, (5) Programmatic Agreement regarding Glen Canyon Dam operations and non-flow actions identified in the Long-Term Experimental and Management Plan (LTEMP) Record of Decision (ROD), and (6) Planning for the Annual Reporting Meeting in January 2018 (due to Federal Government Shutdown this was postponed to March 6-7, 2018).</p> | 10/12/2017 - 10/12/2017 |
| [Glen Canyon Dam Technical Work Group] | <p>(TWG) Discussed, reviewed and received updates on: (1) Potential Rainbow Trout stocking in Glen Canyon, (2) upcoming monitoring and research trips in the Grand Canyon, (3) Long-Term Experimental and Management Plan (LTEMP) biological opinion conservation measures (4) Development of monitoring metrics for the goals and objectives in Section 1.4 of the LTEMP Final Environmental Impact Statement, (5) Basin hydrology and operations, (6) End of Fiscal Year 2017 budget expenditures, (7) Brown Trout in Lees Ferry: Evaluation of causal hypotheses and potential interventions, (8) Expanded non-native management below Glen Canyon Dam, and (9) emerging issues and planning for the next Technical Work Group Meeting.</p> | 01/25/2018 - 01/25/2018 |
| [Glen Canyon Dam Technical Work Group] | <p>(TWG) Discussed, reviewed and received updates on: (1) Funding tribal contracts, (2) Science Advisors Program report, (3) Bright Angel Creek Translocations, (4) Inclusion of the total value of hydropower into information and decision making in the Grand Canyon Adaptive Management Program, (5) Potential Rainbow Trout stocking in Glen Canyon and compliance status, (6) Basin hydrology and operations, (7) Evaluation of temperature control methods at Glen Canyon Dam (Reclamation project C.9) - project overview and status, (8) Status of developing the "Expanded non-native Aquatic Species Management Plan Environmental Assessment, (9) Humpback Chub species status assessment, (10) Annual Reporting Meeting, (11) Possible Long-Term Experimental and Management Plan (LTEMP) experimental and management actions for 2018, (12) State of the budget and work plan and consideration of potential changes to the fiscal year 2 Triennial Work Plan based on Criteria in Section 2.7 of the Budget and Work Plan Process, (13) Bureau of Reclamation and Grand Canyon Monitoring and Research Center updated on Fiscal Year 2018-20 budget, (14) Evaluating the frequency of triggered spring High Flow Experiments assumed in the LTEMP, (15) the 21st Century Colorado River hot drought and implications for the future, (16) Taking of Life Inventory, (17) Cultural Resources Update, and (18) Emerging issues and planning for the next Technical Work Group (TWG) meeting.</p> | 04/23/2018 - 04/24/2018 |

(TWG) Discussed, reviewed and received updates on: (1) Possible experimental actions that may be implemented for calendar year 2018, (2) election of TWG chair and TWG vice-chair, (3) U.S. Fish and Wildlife Service activities, (4) Reclamation Project C.9 - Temperature Control Device, (5) Rainbow Trout stocking in Glen Canyon and compliance status, (6) Status of developing the "Expanded Non-native Aquatic Species Management Plan, (7) Green Sunfish situation, (8) Experimental actions to be considered in calendar year 2019 and beyond, (9) possible experimental actions to be implemented in calendar year 2019, (10) Passage of Fiscal Year 2019 budget and work plan, (11) Results from Grand Canyon Monitoring and Research Center Water Quality Review, (12) Progress of the Bug Flow Experiment, (13) Field Trip Report about Caddisfly outbreak below Davis Dam, (14) Benthic foodbase studies in Glen and Grand Canyons and a comparable analysis of the aquatic macroinvertebrate assemblages in Tapeats Creek and the regulated Colorado River, (15) High Flow Experiment design, (16) Long-Term Experimental and Management Plan (LTEMP) tools and methods, and (17) emerging issues and planning for the next Technical Work Group Meeting.

06/25/2018 - 06/26/2018

Number of Committee Meetings Listed: 7

| | Current FY | Next FY |
|---|--------------|--------------|
| 18a(1). Personnel Pmts to Non-Federal Members | \$0.00 | \$0.00 |
| 18a(2). Personnel Pmts to Federal Members | \$41,710.00 | \$44,443.00 |
| 18a(3). Personnel Pmts to Federal Staff | \$286,287.00 | \$350,654.00 |
| 18a(4). Personnel Pmts to Non-Member Consultants | \$0.00 | \$0.00 |
| 18b(1). Travel and Per Diem to Non-Federal Members | \$8,042.00 | \$20,300.00 |
| 18b(2). Travel and Per Diem to Federal Members | \$6,662.00 | \$5,000.00 |
| 18b(3). Travel and Per Diem to Federal Staff | \$16,853.00 | \$20,300.00 |
| 18b(4). Travel and Per Diem to Non-member Consultants | \$0.00 | \$0.00 |
| 18c. Other(rents,user charges, graphics, printing, mail, etc.) | \$20,260.00 | \$25,521.00 |
| 18d. Total | \$405,634.00 | \$516,071.00 |
| 19. Federal Staff Support Years (FTE) | 3.18 | 3.89 |

20a. How does the Committee accomplish its purpose?

The purpose of the Glen Canyon Dam Adaptive Management Work Group (AMWG) is to establish and implement long-term monitoring programs and activities that will ensure that Glen Canyon Dam is operated in a manner consistent with that of section 1802 of the Grand Canyon Protection Act. The AMWG accomplishes its work by taking action on recommendations from its technical subcommittee, reviewing scientific results provided by the Grand Canyon Monitoring and Research Center, and evaluating assessments conducted by the Science Advisors (under contract to the U.S. Bureau of Reclamation). In addition, stakeholders and other entities involved in conducting research provide documents and make presentations to the AMWG. With these levels of review and involvement, the AMWG is able to provide well informed recommendations to the Secretary of the Interior. The AMWG responds accordingly to challenges being faced in operating Glen Canyon Dam by making recommendations to the Secretary of the Interior through the Secretary's Designee, the Assistant Secretary for Water and Science.

20b. How does the Committee balance its membership?

The Glen Canyon Dam Environmental Impact Statement (EIS) prepared in March 1995 identified the AMWG membership as: (1) representation from each of the cooperating agencies associated with the EIS, (2) representatives from each of the Colorado River Basin States, and (3) two representatives each from environmental groups, recreation interests, and contractors from Federal power from Glen Canyon Dam. This configuration of Federal, State, tribal, and community representation has served the adaptive management program well since it was chartered in 1997. While the membership remains static because of the above designations, there are sufficient changes in personnel to maintain the integrity of the group and be actively engaged in all subject matters. Many of the members, particularly those in the basin states, participate in other groups and bring added knowledge and experience to the AMWG. It should be noted that on June 6, 2018, a Federal Register Notice was published as an open call got nominations for those who might be interested in serving on the AMWG. Because there were several members who were reapplying to serve on the AMWG and due to the lengthy process of getting nomination letters through the various organizations, most notably those from the seven basin states, a second Notice was published on July 20, 2018, extending the submission time to August 20, 2018.

20c. How frequent and relevant are the Committee Meetings?

The AMWG holds two in-person meetings and one virtual meeting during the fiscal year. The meetings are very relevant in keeping the Secretary of the Interior and the general public informed on significant areas of concern related to Glen Canyon Dam operations. For example, when the August meetings are held in Flagstaff, Arizona, local business owners, river guides, and interested persons, etc., attend and participate as a means of conveying their interest and insight to work being done in the Grand Canyon. Meetings or conference calls are noticed in the Federal Register and are scheduled at venues to ensure maximum member and public participation.

20d. Why can't the advice or information this committee provides be obtained elsewhere?

This committee fulfills Sections 1804 and 1805 of the Grand Canyon Protection Act. The Grand Canyon Protection Act requires the Secretary of the Interior to consult with certain stakeholders on the operation of the Glen Canyon Dam; that consultation has occurred through the establishment and continuing advisory role of the AWMG Federal advisory committee. Consultation through the AMWG began with the 1996 Record of Decision for the Operation of Glen Canyon Dam Final Environmental Impact Statement and continued through the 2016 Record of Decision for the Glen Canyon Dam Long-Term Experimental and Management Plan Environmental Impact Statement (LTEMP EIS). This committee creates a forum for the open exchange of ideas from a diversity of stakeholders who are

committed to improving the Colorado River resources in Glen and Grand Canyons. Each member actively participates and has a vested interest in the operation of Glen Canyon Dam. The committee provides a forum for members to resolve their differences in a cohesive setting. Compromises are often needed in order to benefit the whole program. The AMWG often addresses complex issues through collaboration, which typically improves overall solutions and reduces the potential for future conflict.

20e. Why is it necessary to close and/or partially closed committee meetings?

All committee meetings are open to the public.

21. Remarks

Recommendations to the Secretary of the Interior are in the February 14-15, 2018, and August 22-23, 2018, meeting minutes.

Designated Federal Officer

Brent Rhees Regional Director

| Committee Members | Start | End | Occupation | Member Designation |
|----------------------------|--------------|------------|--|---------------------------|
| Arviso-Ciocco (A), Melinda | 02/16/2016 | 02/16/2020 | Tribal Member | Representative Member |
| Balsom (A), Jan | 12/04/2006 | 02/16/2020 | Archeologist, Grand Canyon National Park | Ex Officio Member |
| Barrett (M), Clifford | 08/20/2018 | 08/20/2021 | Consultant, Utah Municipal Power Agency | Representative Member |
| Bobelu (M), Eric | 02/16/2016 | 02/16/2020 | Tribal Member | Representative Member |
| Bowekaty (A), Carleton | 02/16/2016 | 02/16/2020 | Tribal Member | Representative Member |
| Brown (A), Carlee | 08/20/2018 | 08/20/2021 | Interstate, Federal & Water Information Section Chief | Representative Member |
| Brown (M), David | 07/14/2016 | 07/14/2020 | Grand Canyon River Guides Representative of River Recreation | Representative Member |
| Bulletts (M), Charley | 12/04/2006 | 06/08/2019 | Kaibab Band of Paiute Indians Tribal Member | Representative Member |
| Callister (A), Kathleen | 02/16/2016 | 07/10/2019 | Bureau of Reclamation | Ex Officio Member |
| Cantrell (A), Chris | 07/17/2015 | 04/15/2018 | Chief of Fisheries, Arizona Game and Fish Department | Representative Member |
| Chandler (M), Clint | 08/20/2018 | 08/20/2021 | Asst. Director, Water Planning & Permitting Division | Representative Member |
| Dahl (A), Kevin | 08/20/2014 | 12/13/2017 | Arizona Program Manager, NPCA | Representative Member |
| Dixon (M), Deborah | 11/10/2015 | 05/31/2017 | Dir., New Mexico Interstate Stream Commission | Representative Member |
| Garlick (A), Kevin | 08/20/2018 | 08/20/2021 | Power Resource Manager, Utah Municipal Power Agency | Representative Member |
| Hamill (A), John | 11/10/2015 | 08/20/2018 | Federation of Fly Fishers/Trout Unlimited | Representative Member |
| Harkins (M), Jayne | 12/27/2011 | 02/16/2020 | Executive Director, Colorado River Commission of Nevada | Representative Member |
| Harris (A), Christopher | 12/04/2006 | 07/25/2018 | Executive Director, Colorado River Board of California | Representative Member |
| Hubbs (M), Dawn | 02/16/2016 | 10/17/2017 | Tribal Member | Representative Member |
| James, Leslie | 07/30/1998 | 08/20/2021 | Executive Director, CREDA | Representative Member |
| Jordan (M), John | 06/23/2010 | 08/20/2021 | Federation of Fly Fishers | Representative Member |

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|--|-----------------------|--|-----------------------|
| Kartha (A), Vineetha | 12/13/2013 08/20/2021 | Environmental Planner, Arizona Dept of Water Resources | Representative Member |
| King (A), Robert | 12/04/2006 02/03/2019 | Chief, Interstate Streams Section of UDWR | Representative Member |
| Kuwanwisiwma (M), Leigh | 06/27/1997 12/31/2017 | Director, Cultural Preservation Office | Representative Member |
| Lehnertz (M), Christine | 11/08/2016 11/08/2020 | Superintendent, Grand Canyon National Park | Ex Officio Member |
| Lewis (M), Charles "Chip" | 08/06/2013 08/20/2021 | BIA Regional Environmental Protection Officer | Ex Officio Member |
| McClow (M), John | 12/19/2013 08/20/2021 | Chair, Colorado Water Conservation Board | Representative Member |
| Millis (M), Eric | 02/03/2015 02/03/2019 | Director, Utah Division of Water Resources | Representative Member |
| Nimkin (M), David | 12/13/2013 12/13/2017 | Director, Southwest Region, NPCA | Representative Member |
| Olson (A), Meghann | 07/10/2015 06/08/2019 | Biologist | Representative Member |
| Ostler (A), Don | 12/04/2006 06/30/2018 | Executive Director, Upper Colorado River Commission | Representative Member |
| Ostler (A), Don | 12/04/2006 06/30/2018 | Executive Director, Upper Colorado River Commission | Representative Member |
| Picard (M), Daniel | 07/10/2015 07/10/2019 | Deputy Regional Director, Bureau of Reclamation | Ex Officio Member |
| Reeder (A), Benjamin | 02/16/2016 08/20/2018 | Member, Board of Directors for Grand Canyon River Guides | Representative Member |
| Stevens (M), Larry | 12/04/2006 06/08/2019 | Grand Canyon Wildlands Council | Representative Member |
| Turkett (A), Warren | 02/16/2016 02/16/2020 | Natural Resource Analyst, Colorado River Commission of Nevada | Representative Member |
| VACANT (M), | | | Representative Member |
| VACANT (M), | | Tribal Member | Representative Member |
| Wolff (M), Steve | 02/03/2015 02/03/2019 | Colorado River Coordinator | Representative Member |
| Yeatts (A), Michael | 04/05/2007 08/20/2018 | Archeologist, Hopi Cultural Preservation Office | Representative Member |
| Young (A), Kirk | 01/04/2013 01/05/2021 | Biologist, U.S. Fish and Wildlife Service | Ex Officio Member |
| Arviso-Ciocco (M), Melinda | | | |
| [Glen Canyon Dam Technical Work Group] | 02/04/2016 02/04/2020 | Navajo Nation | Representative Member |
| Balsom (M), Jan | | | |
| [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Deputy Chief, Science and Resource Management | Ex Officio Member |
| Barrett (M), Clifford | | | |
| [Glen Canyon Dam Technical Work Group] | 06/24/2014 06/24/2020 | Utah Associated Municipal Power Systems | Representative Member |
| Brown (A), David | | | |
| [Glen Canyon Dam Technical Work Group] | 07/14/2016 07/14/2020 | Director, Natural Resources Program for SWCA | Representative Member |
| Brown (M), Carlee | | | |
| [Glen Canyon Dam Technical Work Group] | 10/12/2016 10/12/2020 | Chief, Interstate and Federal Section, Colorado Water Conservation Board | Representative Member |
| Bulletts (M), Charley | | | |
| [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Director, Southern Paiute Consortium | Representative Member |
| Burke (A), Kelly | | | |
| [Glen Canyon Dam Technical Work Group] | 08/25/2017 08/25/2027 | Geologist | Representative Member |
| Cantley (A), Garry | | | |
| [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Archeologist | Ex Officio Member |

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| Capron (M), Shane [Glen Canyon Dam Technical Work Group] | 06/04/2012 06/04/2020 | Fish Biologist | Regular Government Employee (RGE) Member |
| Christensen (M), Kerry [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Senior Scientist | Representative Member |
| Dahl (M), Kevin [Glen Canyon Dam Technical Work Group] | 03/10/2014 03/10/2020 | Arizona Program Manager | Representative Member |
| Davis (M), William [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Colorado River Energy Distributors Association (CREDA) | Representative Member |
| Dongoske (M), Kurt [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | M.S. in Anthropolgy | Representative Member |
| Ellsworth (A), Craig [Glen Canyon Dam Technical Work Group] | 06/04/2012 06/04/2020 | Biologist | Regular Government Employee (RGE) Member |
| Esslin (A), Bret [Glen Canyon Dam Technical Work Group] | 04/16/2018 04/16/2028 | Water Resource Engineer | Representative Member |
| Grantz (M), Katrina [Glen Canyon Dam Technical Work Group] | 01/24/2016 01/24/2020 | Bureau of Reclamation | Ex Officio Member |
| Gwinn (A), Jessica [Glen Canyon Dam Technical Work Group] | 05/16/2016 05/16/2020 | Biologist | Ex Officio Member |
| Harms (M), Paul [Glen Canyon Dam Technical Work Group] | 01/28/2010 01/28/2020 | Staff engineer | Representative Member |
| Harris (M), Chris [Glen Canyon Dam Technical Work Group] | 07/25/2014 07/25/2020 | Colorado River Board of California | Representative Member |
| Healy (A), Brian [Glen Canyon Dam Technical Work Group] | 11/16/2015 11/16/2020 | Fish Biologist | Ex Officio Member |
| Hubbs (A), Dawn [Glen Canyon Dam Technical Work Group] | 08/17/2016 08/17/2020 | Director, Tribal Historic Preservation Office | Representative Member |
| Hyde (M), Ken [Glen Canyon Dam Technical Work Group] | 08/17/2016 08/17/2020 | Chief, Science & Resource Management | Ex Officio Member |
| James (A), Leslie [Glen Canyon Dam Technical Work Group] | 08/30/2013 08/30/2020 | Director. Colorado River Energy Distributors Assoc. | Representative Member |
| Kartha (M), Vineetha [Glen Canyon Dam Technical Work Group] | 12/13/2013 12/13/2023 | Manager, Colorado River Section | Representative Member |
| King (M), Robert [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Master's in Civil and Environmental Engineering | Representative Member |
| Lewis (M), Charles [Glen Canyon Dam Technical Work Group] | 08/06/2013 08/06/2020 | Environmental Protection Specialist | Ex Officio Member |
| Mann (M), Ryan [Glen Canyon Dam Technical Work Group] | 11/21/2016 11/21/2026 | Manager, Aquatic Research Program | Representative Member |

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| Neuwerth (A), Jessica [Glen Canyon Dam Technical Work Group] | 07/07/2015 07/07/2025 | Environmental Scientist | Representative Member |
| Nimkin (A), David [Glen Canyon Dam Technical Work Group] | 12/13/2003 12/13/2020 | Director, Southwest Region of National Parks Conservation Assoc. | Representative Member |
| Noftsker (A), Christina [Glen Canyon Dam Technical Work Group] | 09/12/2018 09/12/2028 | Geographic Information System Technical Expert | Representative Member |
| Omana Smith, Emily [Glen Canyon Dam Technical Work Group] | 09/12/2018 09/12/2028 | Biologist | Ex Officio Member |
| Persons (A), Bill [Glen Canyon Dam Technical Work Group] | 11/21/2017 11/21/2027 | Biologist | Representative Member |
| Reeder (M), Ben [Glen Canyon Dam Technical Work Group] | 01/06/2016 01/06/2020 | Grand Canyon River Guides | Representative Member |
| Roefer (M), Peggy [Glen Canyon Dam Technical Work Group] | 06/06/2016 06/06/2020 | Natural Resource Analyst | Representative Member |
| Rogowski, Dave [Glen Canyon Dam Technical Work Group] | 07/07/2015 07/07/2020 | Biologist | Representative Member |
| Seaholm (A), Dwight [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | | Representative Member |
| Stevens (M), Larry [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Ph.D. in Zoology | Representative Member |
| Strogen (M), Jim [Glen Canyon Dam Technical Work Group] | 12/11/2017 12/11/2027 | Fishery Biologist | Representative Member |
| VACANT (A), Mark [Glen Canyon Dam Technical Work Group] | 08/17/2016 08/17/2020 | Biologist | Ex Officio Member |
| Wolff (M), Steve [Glen Canyon Dam Technical Work Group] | 07/07/2014 07/07/2020 | Wyoming State Engineer's Office | Representative Member |
| Yeatts (M), Michael [Glen Canyon Dam Technical Work Group] | 11/03/2010 11/03/2020 | Archeologist | Representative Member |
| Young (M), Kirk [Glen Canyon Dam Technical Work Group] | 11/14/2012 11/14/2020 | Supervisory biologist | Ex Officio Member |

Number of Committee Members Listed: 82

Narrative Description

The Bureau of Reclamation administers the Glen Canyon Dam Adaptive Management Work Group (AMWG). Reclamation, along with four other DOI agencies (Bureau of Indian Affairs, U.S. Fish and Wildlife Service, U.S. Geological Survey, and National Park Service) works collectively under DOI's mission to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about

those resources; and honor its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities. The AMWG is dedicated to resolving complex issues related to the operation of Glen Canyon Dam, mitigating for damage caused by the dam, and improving conditions for endangered species with the overall goal of doing what is best for all resources in the Grand Canyon. The AMWG is an important means by which Reclamation meets its mission to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

What are the most significant program outcomes associated with this committee?

Checked if Applies

| | |
|---|-------------------------------------|
| Improvements to health or safety | <input checked="" type="checkbox"/> |
| Trust in government | <input checked="" type="checkbox"/> |
| Major policy changes | <input type="checkbox"/> |
| Advance in scientific research | <input checked="" type="checkbox"/> |
| Effective grant making | <input type="checkbox"/> |
| Improved service delivery | <input type="checkbox"/> |
| Increased customer satisfaction | <input checked="" type="checkbox"/> |
| Implementation of laws or regulatory requirements | <input checked="" type="checkbox"/> |
| Other | <input checked="" type="checkbox"/> |

Outcome Comments

The AMWG utilizes the best available science and legal authorities in making critical recommendations for protecting and improving the resources in the Grand Canyon. Efforts are made to keep the public informed of decisions being made by the Department of the Interior that may affect them. Local anglers and supporting businesses in the Page, Arizona, area have expressed concern when high flow experiments are conducted as they can have economic impacts on local fishing activities. Other groups, including recreational rafters and supporting businesses, have expressed support for the high flow experiments as they rebuild beaches in the Grand Canyon. The Secretary's Designee engages in Government-to-Government consultation to discuss concerns raised by Native American Tribes on program activities.

What are the cost savings associated with this committee?

Checked if Applies

| | |
|-----------------------|--------------------------|
| None | <input type="checkbox"/> |
| Unable to Determine | <input type="checkbox"/> |
| Under \$100,000 | <input type="checkbox"/> |
| \$100,000 - \$500,000 | <input type="checkbox"/> |

\$500,001 - \$1,000,000
\$1,000,001 - \$5,000,000
\$5,000,001 - \$10,000,000
Over \$10,000,000
Cost Savings Other

☒
☐
☐
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Cost Savings Comments

Because the AMWG is comprised of stakeholders from several western states, environmental and recreational groups, purchasers of Federal power, and representatives from five Federal agencies, there is an intended cost savings in resolving issues in regular meetings versus individual meetings as well as reducing the potential for litigation with the Department of the Interior.

What is the approximate Number of recommendations produced by this committee for the life of the committee?

56

Number of Recommendations Comments

In Fiscal Year 2018, two recommendations were forwarded to the Secretary of the Interior: (1) The Secretary continue to communicate to the Office of Management and Budget the AMWG's concerns about adequate funding for the Glen Canyon Dam Adaptive Management Program and other critically important programs in the Upper Colorado River Basin consistent with Congressional authorizations, and (2) The Secretary of the Interior approve the Fiscal Year 2019 budget with amended budget tables.

What is the approximate Percentage of these recommendations that have been or will be Fully implemented by the agency?

95%

% of Recommendations Fully Implemented Comments

The budget recommendation is presented at the August/September meeting and past acceptance of this and other AMWG recommendations by the Secretary indicates they will likely be supported going forward into FY2019. Because AMWG recommendations are usually based on the consensus of a very diverse group of 24 stakeholders, the recommendations of the committee are generally very sound and align with DOI policies and priorities.

What is the approximate Percentage of these recommendations that have been or will be Partially implemented by the agency?

4%

% of Recommendations Partially Implemented Comments

It's anticipated the Secretary will concur with the majority of recommendations forwarded from the AMWG. However, a 5% ratio is factored in for those which may not be acted upon by the Secretary.

Does the agency provide the committee with feedback regarding actions taken to implement recommendations or advice offered?

Yes ☒ No ☐ Not Applicable ☐

Agency Feedback Comments

Feedback from the Secretary is provided through the Secretary's Designee at regularly scheduled AMWG meetings, conference calls, and e-mail messages.

What other actions has the agency taken as a result of the committee's advice or recommendation?

Checked if Applies

| | |
|-----------------------------------|-------------------------------------|
| Reorganized Priorities | <input checked="" type="checkbox"/> |
| Reallocated resources | <input checked="" type="checkbox"/> |
| Issued new regulation | <input type="checkbox"/> |
| Proposed legislation | <input type="checkbox"/> |
| Approved grants or other payments | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |

Action Comments

Depending on any environmental changes (weather, ecological, etc.) which occur in the Grand Canyon, some research projects may be re-prioritized to address critical program concerns in a short period of time. Discussions are fully vetted through the technical subcommittee with input from the Science Advisors before any recommendation(s) are forwarded to the AMWG for further deliberation and possible action.

Is the Committee engaged in the review of applications for grants?

No

Grant Review Comments

N/A

How is access provided to the information for the Committee's documentation?

Checked if Applies

| | |
|---------------------------|-------------------------------------|
| Contact DFO | <input checked="" type="checkbox"/> |
| Online Agency Web Site | <input checked="" type="checkbox"/> |
| Online Committee Web Site | <input checked="" type="checkbox"/> |
| Online GSA FACA Web Site | <input checked="" type="checkbox"/> |
| Publications | <input checked="" type="checkbox"/> |
| Other | <input type="checkbox"/> |

Access Comments

Since 1996, the Glen Canyon Dam Adaptive Management Program has conducted experiments to better understand how dam operations and other actions under the authority of the Secretary of the Interior can achieve an equitable balance among competing resource management objectives. Through adaptive management learning and collaborative stakeholder processes, the members of the Adaptive Management Work Group Federal advisory committee have formulated recommendations for experimental dam operations, control actions for non-native species, habitat protection for native species, and translocation of endangered species into refuges. These changes have resulted in greater sand conservation for building beaches, increases in the population size and geographic distribution of an endangered fish, better protection of national park resources, and improved experiences for river runners, while continuing to meet obligations for water storage and delivery required under agreements among the seven Colorado River Basin states. The adaptive management effort continues to make progress in forming partnerships among participants, understanding resource issues, and experimenting with dam operations and other management actions to carry out the intent of the Grand Canyon Protection Act. The AMWG serves as a mechanism for keeping pace with societal expectations, while continuing to provide project benefits as envisioned by Congress in passing the Colorado River Storage Project Act. At the AMWG meeting held in February 2017, a motion was passed to address the emerging issue of brown trout in the Lees Ferry Reach of the Colorado River in order to determine (1) the root causes of the increases in brown trout, (2) the risks associated with an expanding Brown Trout population to a quality Rainbow Trout fishery in Lees Ferry and the recovery/conservation of Humpback Chub and other native fish down river, (3) the pros and cons of different experimental and management options to address those risks including but not limited to mechanical removal, trout management flows, and the current High Flow Experiment protocol, (4) the research needs to support more informed decisions moving forward, and (5) management recommendations for minimizing the negative effects of brown trout. It further suggested a workshop be organized to facilitate communication among scientists, managers, tribes and interested stakeholders. Initial discussions were started but due to the DOI FACA committee review and suspension of any work in the FACA committees

(May 9 – June 5), a Brown Trout Workshop was held on Sept. 21-22 following an AMWG meeting. An Open File Report was published by the U.S. Geological Survey in April 2018 explaining the possible causes and potential actions to be taken. There is a 64% chance that Brown Trout numbers will increase, and if they do, it will have negative impacts on endangered Humpback Chub. Causes for the increase are still unclear. Removal efforts could reduce Brown Trout numbers by as much as 50%. As part of the Long-Term Experimental and Management Plan (LTEMP) Biological Opinion, Reclamation is evaluating current and evolving technologies to address water temperature changes that might make it easier for warm-water nonnative fishes to live in the river system. Reclamation conducted preliminary modeling of release temperatures at various reservoir levels and use of cooler releases. A white paper describing possible temperature control methods will be forthcoming. The macroinvertebrate, or "bug flow," experiment appears to be resulting in increased insect abundance in the river system. Anecdotal evidence from Marble Canyon and Lees Ferry purposes better fishing conditions during the bug flow experiment.